

What is claimed is:

1 1. A flat panel display, at least comprising:
2 a panel having a plurality of pixels, wherein each of
3 the pixels comprises at least one reflective
4 area and at least one transmissive area and the
5 ratio of the transmissive area of each pixel on
6 the panel to the area of the pixel varies
7 according to the distance from the pixel to the
8 central position of the panel and exhibits a
9 first distribution function; and
10 a light module supplying light to illuminate the
11 panel, wherein the light intensity exhibits a
12 second distribution function.

1 2. The display as claimed in claim 1, wherein the
2 light module comprises:
3 a light source supplying the light; and
4 a light guide plate guiding the light to the panel.

1 3. The display as claimed in claim 2, which further
2 comprises a prism between the light source and the light
3 guide plate to direct the light to the light guide plate.

1 4. The display as claimed in claim 2, wherein the
2 light guide plate has an inclined plane structure.

1 5. The display as claimed in claim 2, wherein the
2 light guide plate has a plane structure.

1 6. The display as claimed in claim 2, wherein the
2 light guide plate is a backlight plate.

1 7. The display as claimed in claim 2, wherein the
2 light guide plate is a frontlight plate.

1 8. The display as claimed in claim 1, wherein the
2 transmissive area is circular, rectangular, or elliptical.

1 9. The display as claimed in claim 1, wherein the
2 first distribution function is a function complementary to
3 a Gaussian function.

1 10. The display as claimed in claim 1, wherein the
2 first distribution function is a continuous function.

1 11. The display as claimed in claim 1, wherein the
2 second distribution function is a Gaussian function.

1 12. The display as claimed in claim 1, wherein the
2 second distribution function is a continuous function.

1 13. The display as claimed in claim 1, wherein the
2 product of the first distribution function and the second
3 distribution function is a continuous function.

1 14. The display as claimed in claim 1, wherein the
2 ratio of the difference between the highest brightness and
3 the lowest brightness supplied by the light module to the
4 highest brightness supplied by the light module is within
5 the range of 30% to 70%.

1 15. The display as claimed in claim 1, wherein the
2 ratio of the area of the transmissive area or the
3 reflective area of the center pixel to the area of the

4 transmissive area or the reflective area of the outermost
5 pixel is between 0.2 and 5.

1 16. A flat panel display, at least comprising:
2 a panel having a plurality of pixels, wherein each of
3 the pixels has indices of reflectivity and
4 transmittivity and the transmittivity of each
5 pixel on the panel varies according to the
6 distance from the pixel to the central position
7 of the panel and exhibits a first distribution
8 function; and
9 a light module supplying light to illuminate the
10 panel, wherein the light intensity exhibits a second
11 distribution function.

1 17. The display as claimed in claim 16, wherein the
2 light module comprises:
3 a light source supplying the light; and
4 a light guide plate guiding the light to the panel.

1 18. The display as claimed in claim 17, which
2 further comprises a prism between the light source and the
3 light guide plate to direct the light to the light guide
4 plate.

1 19. The display as claimed in claim 17, wherein the
2 light guide plate has an inclined plane structure.

1 20. The display as claimed in claim 17, wherein the
2 light guide plate has a plane structure.

1 21. The display as claimed in claim 17, wherein the
2 light guide plate is a backlight plate.

1 22. The display as claimed in claim 17, wherein the
2 light guide plate is a frontlight plate.

1 23. The display as claimed in claim 16, wherein the
2 first distribution function is a function complementary to
3 a Gaussian function.

1 24. The display as claimed in claim 16, wherein the
2 first distribution function is a continuous function.

1 25. The display as claimed in claim 16, wherein the
2 second distribution function is a Gaussian function.

1 26. The display as claimed in claim 16, wherein the
2 second distribution function is a continuous function.

1 27. The display as claimed in claim 16, wherein the
2 product of the first distribution function and the second
3 distribution function is a continuous function.

1 28. The display as claimed in claim 16, wherein the
2 ratio of the difference between the highest brightness and
3 the lowest brightness supplied by the light module to the
4 highest brightness supplied by the light module is within
5 the range of 30% to 70%.

1 29. The display as claimed in claim 16, wherein the
2 ratio of the index of the transmissive or the reflective
3 of the center pixel to the index of the transmissive or
4 the reflective of the outermost pixel is between 0.2 and
5 5.

1 30. The display as claimed in claim 16, wherein each
2 pixel comprises a metal layer with reflective and
3 transmissive capabilities.

1 31. The display as claimed in claim 16, wherein each
2 pixel comprises a multilayered film with reflective and
3 transmissive capabilities.